

*Cyrtandra rotumaensis* (Gesneriaceae) of Rotoma Island  
Pacific Plant Studies 20<sup>1</sup>

HAROLD ST. JOHN<sup>2</sup>

THE GENUS *Cyrtandra* extends from Malaya to eastern Polynesia, and includes some 600 species. The writer in 1938 made collections of the flora of Rotuma Island, an isolated, low, volcanic island that is situated about 300 miles north of the Fiji Archipelago. Only one species of *Cyrtandra* was discovered there, but it was notable in being a halophyte and in being poisonous. The nearest high land is in Fiji, so it is not surprising that the closest relative of the Rotuman species is one found in Fiji.

*Cyrtandra rotumaensis* sp. nov.

Figs. 1, 2

NOM. VERN.: "momoe" (Rotuman language).

DIAGNOSIS HOLOTYPI: Frutex 2 m altus est, ramis 10–13 mm diametro tetragonis mox glabris et eis vetustioribus laevibus lucidis pallide brunneis partibus exterioribus subcarnosis et in sicco contractis et fugis longitudinalibus formantibus, cicatricibus foliorum connatis et perfoliatis 6–7 mm altis obcordati-scutelliformatis cum lateribus connatis ligulatis obscure brunneis tarde pallide brunneis, fasciculis 9, novellis dense hinulei-coloratis divergentibus catenulatis villosulis, ramulis foliosis tetragonis minus villosulis, internodiis 10–83 plerumque 15 mm longis, foliis oppositis in 2–4 nodis adscendentibus non congregatis inaequalibus uno 1/10–1/4 minori, petiolis 3–8 cm longis dense hinulei-coloratis divergentibus catenulatis villosulis, laminis 12–33 cm longis 9.5–18.5 cm latis crassiter chartaceis subcarnosis sed in sicco graciliter chartaceis supra viridibus infra fere albis inconcinnis ellipticis vel late ellipticis latere uno latiori et longiori apice subacuto basi inaequaliter decurrenti supra separatiter adpresse catenulatis villosulis et quando vetustis remote villosulis infra in juvente densiter hinulei-

coloratis divergentibus catenulatis villosulis sed minus quando vetustioribus nervis lateralibus 6–8 in dimidio quoque adscendentibus tum curvatis adscendentibus et proxima marginem sursum curvatis et interconnectis, cymis 5–9-floriferis in flore ex axillis foliosis sed in fructu ex 1–2 nodis nudis, pedunculo 8–10 mm longo divergenti eo pedicellis bracteis calycibusque densiter hinulei-coloratis divergentibus catenulatis villosulis, pedicellis 5–10 mm longis gracilibus cum bracteis oppositis apicalibus 2–5 mm longis lanceolatis, alabastris ovoideis cum rostro lanceoloideo, calycibus 8–10 mm longis post florescentibus deciduis viridibus intra glabris extra densiter albi-puberulis tubo hemisphaerico 1.5–2 mm alto limbo bilabiato intra labias binas 7.5–9.5 mm partito, labia supra trilobata lobis 7–9 mm longis et per 6–8 mm partitis concavis anguste ovatis apice lanceolato, labia infera bilobata lobis 7–9 mm longis concavis inconcinnis ellipticis acutis, corolla 11–11.5 mm longa alba extra glabra tubo 7–7.5 mm longo recto in basi 3.5 mm diametro in medio 3 mm diametro in orificie 4.5 mm diametro, limbo bilabiato et inter labias 5 mm partito 5-lobato, labia supra bilobata lobis 3 mm longis 4 mm latis obliquiter semiorbicularibus in et proxima orem capitati-glandulosi-puberulentis, labia infera trilobata lobis binis lateralibus 4–5 mm longis 3.5 mm latis semiorbicularibus cum pilis simulantibus, loba infera 3.5 mm longa 3 mm lata suborbiculari cum pilis simulantibus, 2 staminibus inferis perfectis et cum filamentis in tubo adnato usque ad 2 mm ex ore parte libera 2 mm longa tereta spiraliter adscendenti, antheris binis perfectis 1.3 mm longis 0.8 mm latis fere concinnis ovatis, connectivo 0.3 mm lato lanceolato obscuro, staminodeis binis lateralibus usque ad 1.5 mm ex ore cum tubo adnatis parte libera filamentis 0.5 mm longa filamentosa, apice antheroidea 0.1 mm longa vadose convexa, staminodio supero usque ad 2.2 cm ex ore cum tubo adnato parte libera filamentae 1 mm longa filamentosa, apice antheroidea 0.1 mm alta convexa pallida, ovario

<sup>1</sup> Manuscript received September 22, 1969.

<sup>2</sup> B. P. Bishop Museum, Honolulu, Hawaii 96818 U. S. A.

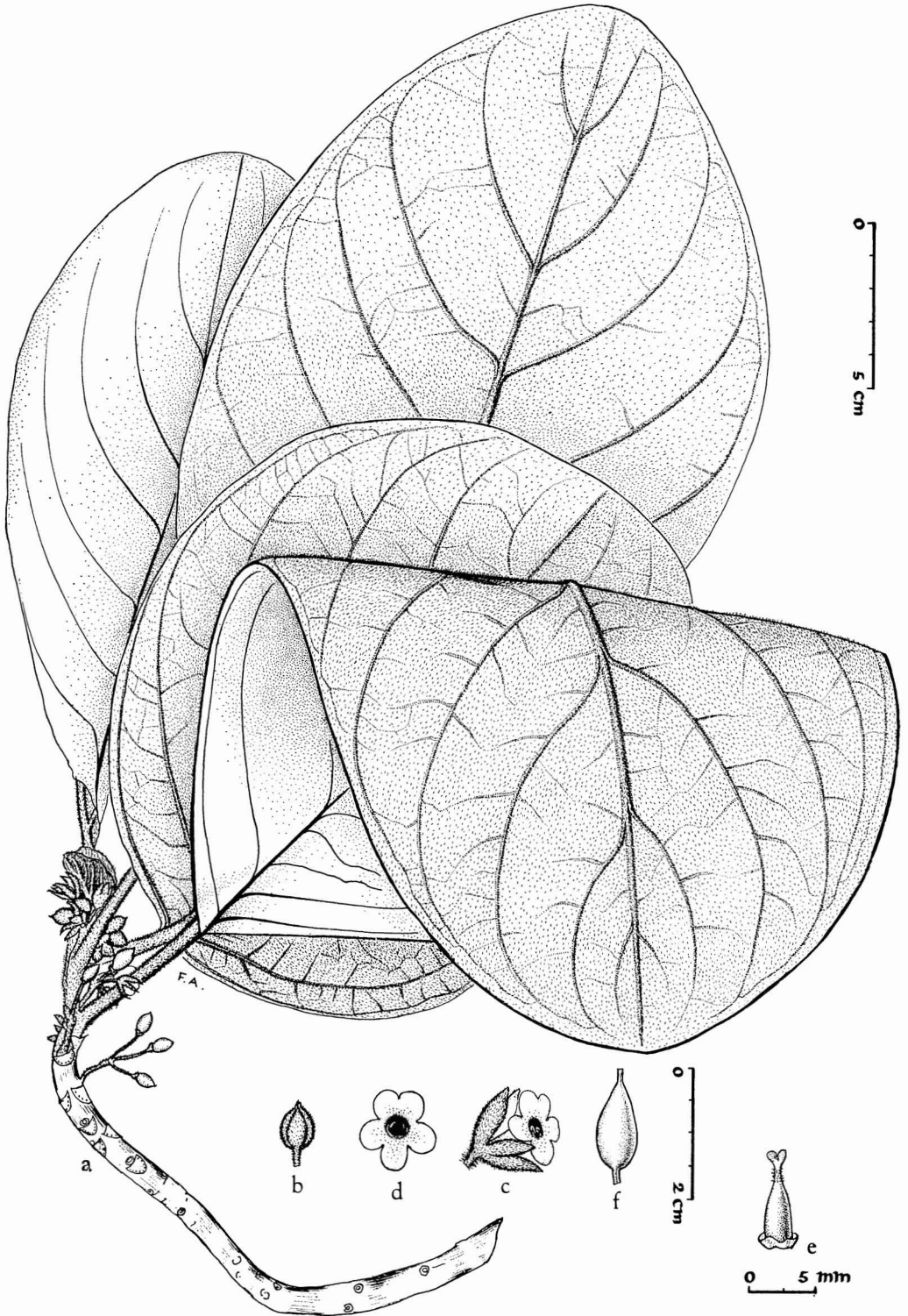


FIG. 1. *Cyrtandra rotumaensis* St. John. a, Habit,  $\times 1/2$ ; b, bud,  $\times 1$ ; c, d, flower,  $\times 1$ ; e, pistil,  $\times 2$ ; f, berry,  $\times 1$ .



FIG. 2. *Cyrtandra rotumaensis* St. John, holotype, on cliff at Motusa, Rotuma Island.

2–3 mm longo lanceoloideo glabro in basi cum disco cupulato 0.7 mm alto cincto, *stylo* 2 mm longo capitati-glandulosi-puberulento, lobis binis stigmatis 1.5 mm longis suborbicularibus et in latere proximali in tertia infera connata, *baccis* 12–13.5 mm longis 5–5.5 mm diametro nudis albis lanceoloideis laevibus, seminibus 0.27–0.36 mm longis 0.16–0.17 mm diametro late ellipsoideis rubri-brunneis sed apicibus umbonatis obscure brunneis in superficie cum reticulis cellulosis elevatis hexagonalibus et fere 4 in linea quoque.

**DIAGNOSIS OF HOLOTYPE:** Shrub 2 m tall; stems 10–13 mm in diameter, tetragonal, soon glabrate and the older ones smooth, shining, tawny, the outer layers somewhat fleshy, and on drying shrinking to form longitudinal ridges; leaf scars connate and perfoliate, 6–7 mm high, obcordate shield-shaped and with ligulate connections, dark brown, then soon tawny; bundle scars 9; young shoots densely tawny spreading catenulate villosulous; leafy branchlets 4-sided, the villosity more sparse; internodes 10–83 but

usually about 15 mm long; *leaves* opposite, in 2–4 pairs, ascending, not crowded, unequal, one of each pair being  $1/10$ – $1/4$  the smaller; petioles 3–8 cm long, densely tawny spreading catenulate villosulous; *blades* 12–33 cm long, 9.5–18.5 cm wide, thick chartaceous, somewhat fleshy, but when dried becoming thin chartaceous, green above, whitish beneath, asymmetric elliptic or broadly so, one side being distinctly broader and longer, the apex subacute, the base unequally decurrent, above spaced appressed catenulate villosulous, more remotely so in age, below when young densely tawny spreading catenulate villosulous, but in age moderately so, the lateral veins 6–8 on a side, ascending, then curved ascending, and near the margin upcurved and interconnected; *cynes* 5–9-flowered, from the leafy axils when in flower, but from 1–2 naked nodes when in fruit; peduncle 8–10 mm long, diverging, it, pedicels, bracts, and calyx densely tawny spreading catenulate villosulous; pedicels 5–10 mm long, slender; the paired bracts at the apex of the peduncle 2–5 mm long, lanceolate; buds ovoid with a lanceoloid beak;

*calyx* 8–10 mm long, deciduous after flowering, green, within glabrous, without closely white puberulous, the tube hemispheric, 1.5–2 mm high, the limb bilabiate and the cleft between the two lips 7.5–9.5 mm deep; upper lip 3-lobed, the lobes 7–9 mm long, the lobes parted for 6–8 mm, concave, narrowly ovate with a lanceolate tip; lower lip 2-lobed, the lobes 7–9 mm long, concave, asymmetrically elliptic, acute; *corolla* 11–11.5 mm long, white, glabrous without, the tube 7–7.5 mm long, straight, 3.5 mm in diameter at the base, 3 mm at the middle, 4.5 mm at the throat, the limb 2-lipped, cleft 5 mm between the lips, 5-lobed; the upper lip 2-lobed, the lobes 3 mm long, 4 mm wide, obliquely semiorbicular, capitate glandular puberulent at and near the throat; lower lip 3-lobed, the 2 lateral lobes 4.5 mm long, 3.5 mm wide, semiorbicular, similarly puberulent; lower lobe 3.5 mm long, 3 mm wide, suborbicular, similarly puberulent; 2 lower stamens perfect, their filaments adnate to the corolla tube to within 2 mm of the throat, the free portion 2 mm long, terete, spirally upcurved, ascending, the 2 perfect anthers 1.3 mm long, 0.8 mm wide, nearly symmetrically ovate, the dark connective 0.3 mm wide, lanceolate; the 2 lateral staminodia with their filaments adnate to the corolla tube to within 1.5 mm of the throat, the free part 0.5 mm long, filamentous, the antheroid tip low convex, 0.1 mm long; the upper staminodium with its filament adnate to the corolla tube to within 2.2 mm of the throat, the free part 1 mm long, filamentous, the antheroid tip a low, convex, pale crest 0.1 mm high; ovary 2–3 mm long, lanceoloid, glabrous; the base surrounded by a cupulate disk 0.7 mm high; *style* 2 mm long, capitate glandular puberulent; the 2 stigmatic lobes 1.5 mm long, suborbicular, connate  $\frac{1}{3}$  way up the proximal side; *berry* 12–13.5 mm long, 5–5.5 mm in diameter, naked, white, lanceoloid, smooth; seeds 0.27–0.36 mm long, 0.16–0.17 mm in diameter, broadly ellipsoid, reddish brown, but the umbonate ends dark brown, the surface with raised cellular reticulations, hexagonal and in longitudinal rows, about 4 in each row.

EXPANDED DESCRIPTION: Blades 9.5–20 cm wide.

HOLOTYPE: Pacific Ocean, Rotuma Island, 12°30' S. Lat., 177°05' E. Long., Motusa,

Itutiu Dist., moist forest on rocks near shore, 15 ft alt., June 30, 1938, *H. St. John* 18,997 (BISH). (Isotypes will be sent to A, K, L, P, SUVA, UC).

SPECIMENS EXAMINED: Pacific Ocean, Rotuma Island, Solnahu Island, moist woods on ridge, 150 ft alt., Aug. 18, 1938, *St. John* 19,555 (BISH); Solkope Island, crevices of basalt sea cliff, 10 ft alt., Aug. 24, 1938, *St. John* 19,707 (BISH); Haua Meamea Island, moist shaded sea cliffs, 20 ft alt., Aug. 1, 1938, *St. John* 19,373 (BISH); Uea Island, in moist crevices of basalt sea cliff, 10 ft alt., Aug. 22, 1938, *St. John* 19,662 (BISH).

The last four collections were made on offshore islets. Only one collection, a large one with several duplicates, was made on the main island, Rotuma, but the species was also observed and noted at eight other localities. These were Kilinga, Losa, Soloroa, Pepjei, Solmatcha, Lulu, Paho, and on Hauatia Island, another offshore islet.

The species is unusual in often growing on exposed sea cliffs, as low as 10–20 feet altitude, in easy reach of salt spray, and is thus a halophyte. It also grows inland in nonsaline, moist forests to at least 150 feet altitude, and I think even higher.

The plant has another property unique in the genus, that of being poisonous. It was recorded in field notes that the herbage, if touched when wet, causes a red skin rash which is very painful and lasts for one day.

*C. rotumaensis* is most closely related to *C. Tempesti* Horne ex C. B. Clarke, of Taveuni Island, Fiji, a species with the inflorescence densely ferrugineous, appressed pilosulous; pedicels 10–20 mm long; buds with the lower half ellipsoid, the upper part a stout beak; calyx 10–12 mm long, white, the 3 upper calyx lobes linear lanceolate; corolla 20 mm long; the 2 upper lobes of the corolla 5.5 mm wide; style glabrous; and the leaf blades 15–24 cm long, 8.5–10 cm wide, ovate elliptic. *C. rotumaensis* has the inflorescence divergent tawny catenulate villosulous; pedicels 5–10 mm long; buds ovoid, with a beak shorter than the body; calyx 8–10 mm long, green, its 3 upper lobes narrowly ovate with a lanceolate tip; corolla 11–11.5 mm long, the 2 upper lobes of the corolla 4 mm wide; style capitate glandular puberulent; leaf

blades 12–33 cm long, 9.5–20 cm wide, asymmetric elliptic or broadly so.

This new species is a member of the subgenus *Cyrtandra*. It does not fit into any of the sections known in Hawaii. As the large genus has not been divided into satisfactory sections, *C. rotumaensis* is not as yet assigned to a section. However, as presented by Gillett (1967, p. 117) it would fit in his Group 4 which includes five Fijian species. Of these the most similar one is

*C. Tempesti* Horne ex C. B. Clarke, of Taveuni Island, Fiji.

The new epithet is formed from the name of the type locality, Rotuma, and *-ensis*, the Latin adjectival place ending.

#### LITERATURE CITED

- GILLETT, GEORGE W. 1967. The genus *Cyrtandra* in Fiji. U. S. National Herbarium, Contributions, vol. 37, pp. 107–159, 1 fig.